

In re Patent Application of

Confirmation No. 4003

HELLINGA et al.

Atty. Ref.: 1579-863

Appln. No. 10/686,529

T.C. / Art Unit: 1645

Filed: October 16, 2003

Examiner: R.A. Zeman

FOR: BIOSENSOR

INFORMATION DISCLOSURE STATEMENT

March 14, 2005

U.S. Patent and Trademark Office.

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Attached is Form PTO-1449 listing the enclosed documents (U.S. patents and patent application publications are not enclosed per 1287 OG 163). Some documents were cited in a search report for related Int'l Patent Appln. No. PCT/US2003/032581; a copy of the search report is also enclosed. No fee is required because a first Office Action on the merits has not yet been received.

This Information Disclosure Statement (IDS) is intended to be in full compliance with the rules, but should the Examiner find any part of its required content to have been omitted, prompt notice to that effect is earnestly solicited, along with additional time under 37 CFR § 1.97(f), to enable Applicants to comply fully. In particular, if any of the listed documents are missing or incomplete, please contact the undersigned who will provide another copy.

03/16/2005 SZEWDIE1 00000033 10686529

01 FC:1251

120.00 OP

HELLINGA et al. - Appln. No. 10/686,529

As provided by 37 CFR §§ 1.97(g) and (h), no inference should be made that the listed documents are prior art merely because they have been submitted for consideration. Furthermore, no representation is being made that a search has been conducted or that this statement encompasses all possible material information.

Consideration of the foregoing and enclosures, as well as the return of a copy of the Form PTO-1449 with the Examiner's initials per M.P.E.P. § 609, are earnestly solicited. The Examiner is invited to contact the undersigned if any further information is needed.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By:

Gary R. Tahigawa Reg. No. 43,180

1100 North Glebe Road, 8th Floor Arlington, VA 22201-4714

Telephone: (703) 816-4000 Facsimile: (703) 816-4100

<i>)</i> Sheet	1	of 3			OIPE					
INFO	DMA	TION DISCLOSURE	ATTY [OCKET NO.	('6)	APPLN	I. NO.			
		CITATION		000	MAR 1 4 2005 4	10/0				
			1579	-863 ANT	E S	10/6	86,529			
CITATION 1579-863 APPLICANT HELLINGA et al. (Use several sheets it necessary) ARR 1 4 2005 HARR 1 4 2005 GROUP GROUP GROUP										
•	Use sev	veral sheets it necessary)	HELL	RADEMAR	GROU	P				
,	,000	,,								
			October 16, 2003			1645				
				U.S. PATEN	DOCUMENTS					
*EXAMINER	3									DATE
INITIAL	IAD	DOCUMENT NUMBER	DATE		NAME Bauer		CLASS	SUBCLASS	<u>IF APPR</u>	<u>OPRIATE</u>
	AR BR	6,096,497 6,130,037	8/2000 10/2000		Lennox et al.				<u> </u>	
	CR	6,197,534 B1	03/2001		Lakowicz et al.					
	DR	6,231,733 B1	05/2001		Nilsson et al.				<u> </u>	
	ER	6,248,229 B1	06/2001		Meade					
	FR	6,277,627 B1	08/2001		Hellinga					
	GR	6,521,446 B1	02/2003		Hellinga					
	HR	6,663,862 B1	12/2003		Hellinga et al.					
	IR	2002/0004217 A1	01/2002		Hellinga		-			
	JR	2003/0129622 A1	07/2003		Hellinga et al.					
	KR	2004/0038378 A1	02/2004	<u></u>	Hellinga et al.					
	LR	2004/0118681 A1	06/2004		Hellinga et al.					
	MR	2004/0229290 A1	11/2004		Hellinga et al.					
FOREIGN PATENT DOCUMENTS										
								,	TRANS	LATION
		DOCUMENT	DATE		COUNTRY		CLASS	SUBCLASS	YES	NO
	NR	WO 98/53849	12/1998	<u> </u>	WIPO					
	OR	WO 98/55853	12/1998		WIPO					
	PR	WO 99/34212	07/1999		WIPO					
	QR	WO 00/74728 A1	12/2000		WIPO					
	RR		03/2003		WIPO					ļ <u></u>
		WO 2004/36176 A2			WIPO					
	_1	WO 2004/36176 A3			WIPO				 	
	JUH	WO 2005/07806 A2			WIPO				<u> </u>	
				•	g Author, Date, Tit					
		Allert et al. "Computational design of receptors for an organophosphate surrogate of the nerve agent soman" Proc. Natl. Acad. Sci. USA 101:7907-7912 (2004)								
	WR Benson et al. "Construction of a novel redox protein by rational design: Conversion of a disulfide bridge into									je into a
		mononuclear iron – sulfur center" Biochemistry 37:7070-7076 (1998)								
		Benson et al. "The de	evelopment	chnologies using me	etallopro [.]	tein desi	gn" Curr. O _l	oin. Biot	echnol.	
		9:370-376 (1998)								
	YR 7D	Benson et al. "Rational design of nascent metalloenzymes" Proc. Natl. Acad. Sci. USA 97:6292-6297 (2000) Benson et al. "Design by bioelectronic interfaces by exploiting hinge-bending motions in proteins" Science								
		293:1641-1644 (2001)								
		Benson et al. "Converting a maltose receptor into a nascent binuclear copper oxygenase by computational design" Biochemistry 41:3262-3269 (2002)								
		Bolon et al. "De novo design of biocatalysts" Curr. Opin. Chem. Biol. 6:125-129 (2002)								
	CCR	Bontidean et al. "Detection of heavy metal ions at femtomolar levels using protein-based biosensors" Anal.								
		Chem. 70:4162-4169 (1998) Boos et al. "Transport properties of the galactose-binding protein of <i>Escherichia coli</i> " J. Biol. Chem. 247:917-								
		924 (1972)								
	EER	Brune et al. "Direct, r probe and its applica								scent
*Examine	r	p. 555 and its applica	10 4010	, 00111 000110						

Tolosa et al. "Glucose sensor for low-cost lifetime-based sensing using a genetically engineered protein" Anal.

Biochemistry 267:114-120 (1999)

Examiner (

Sheet of MAR 1 4 2005 APPLN, NO. INFORMATION DISCLOSURE ATTY, DOCKET NO. THADENS! **CITATION** 10/686,529 1579-863 **APPLICANT** HELLINGA et al. GROUP (Use several sheets it necessary) **FILING DATE** 1645 October 16, 2003 **U.S. PATENT DOCUMENTS** *EXAMINER FILING DATE INITIAL CLASS SUBCLASS IF APPROPRIATE DOCUMENT NUMBER DATE NAME AR BR CR DR FOREIGN PATENT DOCUMENTS TRANSLATION YES CLASS SUBCLASS NO DOCUMENT DATE COUNTRY ER FR GR OTHER DOCUMENTS (including Author, Date, Title, Citation, etc.) Vyas et al. "Crystallographic analysis of the epimeric and anomeric specificity of the periplasmic transport/chemosensory protein receptor for D-glucose and D-galactose" Biochemistry 33:4762-4768 (1994) Wilkins et al. "Glucose monitoring: State of the art and future possibilities" Med. Eng. Phys. 18:273-288 (1996)JR Wisz et al. "Construction of a family of Cys₂His₂ zinc binding sites in the hydrophobic core of thioredoxin by structure-based design" Biochemistry 37:8269-8277 (1998) Wisz et al. "An empirical model for electrostatic interactions in proteins incorporating multiple geometrydependent dielectric constants" Proteins 51:360-377 (2003) Yang et al. "Structural analysis, identification, and design of calcium-binding sites in proteins" Proteins 47:344-356 (2002) Yang et al. "Rational design of a calcium-binding protein" J. Amer. Chem. Soc. 125:6165-6171 (2003) Int'l Search Report for related Int'l Patent Appln. No. PCT/US2003/032581 dated June 8, 2004 NR OR PR QR *Examiner